

## Descriptions Hymenopterorum Chalcidoidicorum Variorum cum Observationibus. III.

By A. A. GIRAULT, Glendale, Maryland.

### *Eupelmus inyoensis* new species.

♀. Closely allied to *juglandis* Ashmead but differs in having the middle tibiae metallic except at each end (hence the legs concolorous except the knees, tarsi and tips of tibiae) and the caudal tibiae all distinctly metallic. Distal three tarsal joints black. The abdomen is somewhat more slender than with *juglandis* and the postmarginal vein is only slightly longer than the stigmal (much longer in *juglandis*). Otherwise about the same. Differs from *brevicaudus* Crawford in the coloration of the legs only.

♂. Similarly colored. Compared with types of the named species.

Described from five females on tags in the United States National Museum labelled "428 Inyo County, California."

*Types*: Catalogue No. 20130, U. S. N. M., the above specimens, an antenna on a slide.

### *Eupelmus coccidis* Girault.

Differs from *limneriae* Howard only in bearing no metallic on the caudal tibiae. One female among the type material of *brevicaudus* Crawford and similarly labelled; the caudal femur was nearly all metallic centrally. There is slight metallic laterad at apex of cephalic femur.

### *Pseudomphale ancylae* new species.

♀. Like *livivorus* Crawford but a third smaller and differing most noticeably in that the distal *half* of each tibia is white not merely the tips. Differs also in the following particulars: Segment 2 of the abdomen is distinctly longer being about half the length of that region and moreover it does not show a broad cross-stripe of scaliness distad (and which widens laterad) as does the other species but its distal half bears rather dense, exceedingly delicate pin-punctures; the other abdominal segments dorsad do not show a distinct, rather coarse scaliness; the petiole is somewhat longer than in *livivorus* and the propodeum glabrous (except within the grooves). Scutellum subglabrous.

Postmarginal vein very slightly longer than the short, usual stigmal; funicle joints subglobular, 1 a little the longest, a little longer than the pedicel, club with a distinct terminal spine. Mandibles bidentate and with four or five minute teeth within.

♂. The same but the club is solid, the funicle 4-jointed (three ring-joints), the joints 3 and 4 subequal, globular, longer than the pedicel, 1

somewhat longer than wide, the scape short and dilated ventrad, the flagellum clothed with rather dense, soft greyish hairs.

Described from one pair reared from *Ancylus nubeculana*, Winchester, Virginia, April 1, 1915 (B. R. Leach).

*Types*: Catalogue No. 20131, U. S. N. M., the above pair on tags, the heads and a pair of female wings on a slide.

***Pseudomphale steirastomae* new species.**

♀. Differs from *metallicus* Ashmead in that the cephalic femur is concolorous (in the type female, the cephalic legs yellow except coxae in the other species) and the tibiae are distinctly marked with black; in *nigrocyanus* Ashmead, the tibiae are all white and the propodeum mostly glabrous; closely allied with *livivorus* Crawford but differs in having the cross-stripe of scaliness on segment 2 of the abdomen distinctly shorter and less distinct, the eyes are larger; *floridanus* (which differs from *microgaster* mostly in the male sex) has the tibiae all white, the propodeum glabrous and the second abdominal segment with minute pin-punctures (except broadly at base); from *brasiliensis* in having the tibiae dark, the second segment of the abdomen shorter (only somewhat less than half the length of the abdomen not three-fourths its length as in *brasiliensis*) and the different sculpture of the latter; from *ancylae* in the different coloration of the legs, the scaly propodeum and the different sculpture of the second abdominal segment; from *hypatia* in the scaly propodeum only. Of the stature of *hypatia*.

The pedicel is elongate, somewhat longer than funicle 1; funicle 3 is somewhat closely attached to the club so that region superficially appears 3-jointed (transition, no doubt).

♂. Similar; its funicle 4-jointed, the joints short, the scape dilated. Three ring-joints. Funicle 1 subequal to the club (more or less) nearly twice longer than wide, the others subquadrate. Mandibles bidentate and with four or five comblike teeth following the acute second tooth.

Described from six males, four females reared from the larvae of *Steirastoma depressum*, Erin, Trinidad, British West Indies, January, 1913 (F. W. Ulrich).

*Types*: Catalogue No. 20132, U. S. N. M., one female, three males on tags and a head of each sex on a slide.

***Pseudomphale graciliventris* new species.**

♀. Of rather small size for the genus. Similar in stature and so forth to *atroscapus* Girault but the abdomen is more slender and graceful and differs in sculpture, there being no distal cross-stripe of scali-

ness, as in the Florida species, but instead there is a similar area of dense minute pin-punctures (extending broadly over half way to base along the meson); the second abdominal segment is a little longer. Also the funicle joints are somewhat longer, 1 somewhat longer than the pedicel.

♂. Similar (but segment 2 of abdomen occupying the entire surface?); funicle 4-jointed, the club solid, the scape distinctly compressed. Funicle 1 somewhat longer than the pedicel, 4 subequal to the pedicel.

Described from one male, seven females reared from an egg-mass of a Cassidid, Erin, Trinidad, British West Indies, March, 1914 (F. W. Urich).

*Types*: Catalogue No. 20133, U. S. N. M., five females on tags, male and female antennae on a slide.

*Psilophrys pulchripennis* Ashmead. Genotype of *Habrolepopteryx* Ashmead.

Mandibles rather long, with three acute, subequal teeth; head shaped as in *Berecynthus*; scrobes forming a distinct semicircular depression; frons moderately narrow; club 3-jointed. Funicle 1 twice longer than wide. Frons subprominent; eyes not very large, longer than the cheeks. Knees, tips of tibiae (broadly in cephalic tibiae), tarsi and the long middle tibia, lemon yellow. General habitus of *Paracalocerinus australiensis* Girault except the ovipositor. From types in the U. S. N. M. The generic description is otherwise correct.

*Habrolepopteryx pulchripennis* Ashmead, *aeneiscapus* new var.

♀. Similar to the genotype but the scape is concolorous.

*Types*: Catalogue No. 20134, U. S. N. M., the specimens on tags. From two females, part of the type of the typical form.

*Paracalocerinus americanus* new species.

♀. Agrees with the description of *australiensis* but the ovipositor is extruded somewhat farther, the oblique eye-spots on the fore wing are larger, their distance from the wing apex is much greater, the cephalic one against the short postmarginal vein (as in the genotype) and besides the fore wing bears a conspicuous longitudinal hyaline streak along the middle from a point between the oblique eye-spots (where it is narrowest) to apex (where it is broadest). The postmarginal vein is slightly longer than the stigmal (the marginal linear, six or more times longer than wide). The frons a little narrower than in the genotype, the scrobes longer and more distinct (the head is somewhat as in *Habrolepopteryx* but the inflexion is less) yet not very long, the mandibles stouter. Funicle 1 smallest, somewhat like a

large ring joint, 2 longest, somewhat longer than wide, 3 quadrate, longer than 1, the others wider than long. The pedicel is somewhat longer and the sculpture of the body is finer than with the Australian species.

Described from one female in the U. S. N. M., from Onaga, Kansas (Crevecoeur).

*Type*: Catalogue No. 20135, U. S. N. M., the thorax on a tag; rest of the body on a slide (including wings) with a female of *australiensis* (Kuranda, Queensland, forest, September, A. P. Dodd).

(*Eupelmus*) *Aphidencyrthus schizoneuræ* (Ashmead).

The tibiae are dark, the mandibles as in *aphidiphagus*, that is, the third tooth truncate. The type female is in bad condition, without wings. The frons is wider than usual.

*Holcencyrtus physokermis* new species.

♀. Length, 1.10 mm. Dark metallic green, the wings hyaline, the venation dusky, the blade of the wing very slightly infuscated distad and caudad of the marginal vein; knees, tarsi and apex of the tibiae pale, middle tibiae more broadly pale at tip, distal tarsal joint dusky.

Pedicel somewhat longer than wide at the apex, subequal in length to joints 1 and 2 of the funicle which are subquadrate; funicle 6 no longer than 1 yet somewhat wider; club two-thirds the length of the funicle and somewhat wider, its joints larger than those of the funicle.

Head and thorax densely scaly, the vertex, scutum, axillae and scutellum with scattered minute setigerous punctures which are not dense yet rather numerous. Axillae slightly separated. Mandibles of tolerable length, their teeth short, equal, the first two acute, the third obtuse but not broad. Head (cephalic aspect) quadrate, the frons broad, not prominent, the eyes ovate, not large, slightly longer than the cheeks. Face inflexed. Pronotum transverse linear.

Marginal vein quadrate or a little longer than wide, thick, the postmarginal and stigmal veins subequal, a half or more longer than the marginal. Hairless line not closed caudad, with six or more lines of cilia proximad of it (these cilia enclosing proximad a triangular naked space). Costal cell broad (with four or five lines of discal cilia). Fore wings ample, densely, finely ciliate.

Ovipositor inserted distad of middle, the abdomen from its insertion, obliquely truncate.

Proximal tarsal joints not long (longest in the middle legs, shortest in the cephalic ones).

♂. The same but the marginal vein is over twice longer than wide, somewhat longer than the postmarginal or stigmal; cephalic and middle legs, caudal femora and tarsi (except last joint), a cinctus on caudal

tibiae joint below the knee and tips of caudal tibiae and the antennae except the pedicel and dorsal edge of the scape, pale lemon yellow. Scape short, convexed distinctly beneath; pedicel globular; funicle joints narrowed at each end, shorter than the solid club, clothed with long, scraggly hairs, subequal, 6 thickest, two and a half times longer than where widest.

Described from one male, twelve females reared from *Physokermes picea*, Madison, Wisconsin, May 12, 1915, June 30 (F. A. Fenton).

*Types*: Catalogue No. 20136, U. S. N. M., one male, six females on a slide (with other male encyrtids); two females on a slide as paratypes.

**Encyrtus ensifer** Howard.

The mandibles are only *bidentate*, the second tooth broadly truncate.

**Xenocrepis mexicana** new species.

♀. Length, 1.55 m. Dark metallic blue, the wings hyaline, the venation fuscous, the knees, tibiae (except sometimes the caudal tibia just below the knee, a fuscous band), tarsi and scape pale yellow; rest of antennae blackish, the pedicel lighter.

Head and thorax densely scaly punctate, the dorsal abdomen glabrous except distad where there is delicate scaliness. Head wider than the thorax, rather thick, the occiput obscurely margined. Antennae inserted a little above the middle of the face; pedicel a little longer than wide, barely longer than funicle 1 which is very slightly longer than wide, 3 quadrate, 5 slightly wider than long; the three ring-joints all short, 1 a little the shortest. Flagellum filiform, the club joints subequal to funicle 1. Mandibles 4-dentate.

Postmarginal vein elongate, nearly as long as the slightly thickened marginal, nearly twice longer than the slender stigmal.

Propodeum finely punctate, with lateral carinae, no median, from lateral aspect with a short, subglobose neck, conical, much longer at the meson than at the spiracle, the latter small, cephalad. Parasidal furrows only cephalad. Abdomen with a very short petiole from beneath the propodeal neck, slightly longer than the rest of the body, pointed conical, not produced beneath, its second segment longest, occupying somewhat over a third of the surface.

Cephalic femur not swollen.

♂. Similar except that the body is weaker and the tibiae metallic except at each end.

Described from ten males, four females on tags in the U. S. N. M., labelled "*Scymnophagus townsendi* Ashmead, 6427° = 6. Townsend. Issued November 30, 1894. Type No. 12725, U. S. N. M."

*Types*: Catalogue No. 12725 U. S. N. M., the above specimens and a slide bearing a head of each sex, a male first femur and three female caudal legs.

The species is parasitic on a Scymnid larva which preys upon *Lecanium oleae* on orange, San Luis, Mexico. Also at Monterey, Mexico, from the larva of *Azya orbigera*. The scutellum has a delicate cross suture near its apex.

**Polynema piceipes** Girault.

The legs are concolorous as the name indicates.

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### Collecting Papaipemae (Lep.).

By ALEX KWIAT, Chicago, Illinois.

My object in writing on this subject is not particularly to recount my own experiences but to serve as a guide to others, who, by its aid, might become interested and succeed in adding to our knowledge of the various species of *Papaipema* and their life histories.

A great deal of careful and painstaking work on this group has been done by Mr. Henry Bird and others during the last eighteen or twenty years and the results published from time to time. My intention is merely to summarize a few of the known facts so that anyone who wishes to do so can seek intelligently for the larvae of species whose food plants and habits are known and rear them to maturity. Anyone working along the lines suggested will not only add materially to his collections but also may discover new species and the life histories of others hitherto unknown.

In general the larvae of the Papaipemae are borers in the stems or roots of persistent annuals or perennial plants and, in at least one instance, in the young shoots of an indigenous tree.

The moths appear rather late in the year, the earliest species about August 15th and the latest about October 5th. They are sluggish of habit and seldom fly far from their breeding place. This sluggishness and the late period of flight accounts for their scarcity in collections.

Eggs are deposited on or near the food plant and hatch the